



Tri-State Steel Drum **March 28, 2002**

Introduction

The Georgia Environmental Protection Division (GEPD) requested that the Georgia Division of Public Health (GDPH) address the public's health concerns associated with the Tri-State Steel Drum Company (TSSD), a permitted, hazardous waste management facility in Graysville, Georgia.

To provide information to address residents' concerns, GDPH discusses the facility's former operations, regulatory compliance history, existing environmental sampling data, whether people at the facility or in the community contacted contamination from the facility, traffic and safety policies, and emergency response capabilities.

Site Description and History

TSSD was in Graysville from the 1960s and obtained a GEPD hazardous waste facility permit in 1984. The permit allowed transport, storage, and treatment of various hazardous wastes at the facility. The facility relinquished its permit in June 2001 and ceased operation at that time. All waste was shipped off site and no new waste has been sent to the facility since then.

TSSD occupied a 90-acre tract southwest of the intersection of Julian and Graysville Roads in Graysville, Catoosa County, Georgia. People could readily enter facility grounds because a railroad track intersected the property near the entrance. The entrance to the site did have clearly visible "no trespassing" and facility identification signs, including the Environmental Protection Agency's (EPA) identification number and address for emergency response. Security fences completely surrounded the perimeter of the hazardous waste management units, thereby limiting access to those areas. Those units were also monitored by security guards and locked during non-operating hours.

The area within one-mile of the former facility is primarily agricultural, residential, and undeveloped woodland. The facility was bordered by Chickamauga Creek to the south, private residences, a road, and railroad to the east, and by agricultural and residential areas to the west and north. According to local officials, the creek and the land near the former facility are not commonly

used for fishing, hunting, recreation, or large-scale agriculture. No known springs, injection wells, or public or individual water wells are within one-quarter mile of the property boundary. Municipal water is available in the area, and the local health department reported that residents do not use individual water wells for normal household water use. The facility used the public water supply for consumption, operations, and fire fighting. Treated wastewater from operations was directed to an on-site septic system. The permitted hazardous waste storage area was within the 100-year floodplain, and TSSD monitored the level of Chickamauga Creek daily.

Environmental Sampling

On-Site Soil

On-site soil samples were collected in 1989, 1993, 1994, and 1997 during GEPD and EPA inspections, as a part of the RCRA Facility Assessments, and in response to a fire at the facility.

Air

TSSD held a hazardous waste facility permit and an air quality permit. The air quality permit was amended in June 1997 to include provisions that volatile organic compounds (VOC) emissions from the drum painting operation were not to exceed 100 tons per year and required quarterly VOC emissions monitoring reports. Several complaints of fog, odor, and haze originating from the facility were also documented. State and federal regulations contain no provisions that address odor from hazardous waste management facilities. In October 1993, a drum furnace emissions evaluation was conducted in accordance with GEPD regulations. The intent of the study was to evaluate the general operating condition of the drum furnace and to address the visible emissions. To evaluate the operating conditions of the furnace and address the visible emissions, exhaust gas temperatures and temperatures within the furnace were obtained.

Off-Site Media

To date, no data exist to characterize off-site environmental media, and according to GEPD, no off-site contamination is suspected because past minor



CHEMICAL HAZARDS PROGRAM
Environmental Health Branch
Georgia Department of Community Health
Atlanta, GA



spills have been contained and cleaned up before contaminants migrated off site. However, reports of residue from furnace emissions on cars suggest that some products migrated through air to off-site areas. No information is available as to the content of that residue. If site perimeter surface soil samples are collected, the results might indicate whether long-lasting toxic chemicals were released in those emissions.

Results

On-Site Soil

Soil sample analyses indicated the presence of elevated levels of lead in some areas requiring excavation of some on-site soil on several occasions. The highest level of lead in soil was 9,400 milligrams per kilogram (mg/kg), found in May 1994. Subsequent soil sampling conducted by GEPD indicated that all of the contaminated soil had been successfully removed. The employees of the facility were the people most likely to contact contaminated soil. No information was available about the employees' safety procedures or use of protective equipment during excavations or about their health status. Other persons who might have been exposed to contaminated soil at this site include facility contractors, guests, and trespassers. No indication was found that children accessed the site and might have been exposed to lead in soil.

Air

From the quarterly emissions reports, GEPD determined in November 1998 that TSSD was a major source of VOC emissions as defined under Title V of the Clean Air Act and ordered TSSD to submit a Title V permit application. Under the new permit, the operation of TSSD would have been required to install new emission control devices. GDPH did not review and evaluate that data. Now that the facility is closed, emissions have stopped.

The temperature measurements verified and confirmed that the furnace temperatures were operating correctly. The facility occasionally produced visible emissions from the exit area of the drum furnace. The visible emissions were a result of incomplete combustion of rubber and plastic seals on a number of hot drums as they exited the furnace and as a result of combustion of ash deposits. From the results of that study, modifications were recommended to minimize exit emissions. The

visible emissions were not sampled and analyzed; therefore, no data are available to evaluate possible exposures.

The influence of odors on the comfort and welfare of individuals is difficult to evaluate. Odors can result in social and behavioral changes in some people. However, odor perception is subjective, and different individuals may react differently to the same type and intensity of odor. People who live near a hazardous waste management facility may become sensitized to odors and report odors as much more intense than someone who only visits the site occasionally. GDPH cannot evaluate whether emissions that reportedly caused odors at TSSD were present at levels of health concern because no data on the contaminants that might have caused the odors were collected.

Conclusions

The facility currently poses ***no public health hazard*** because the facility is now closed and wastes have been removed. Data available for review were not adequate to evaluate past site conditions. No creek water and sediment data were available to determine if contact with the water and sediments could cause harm. Air monitoring data were not available that would have helped evaluate any health impact of emissions from the furnace. Soil data were incomplete, and no off-site soil data are available to determine if contaminants migrated from the site to nearby residences. People could currently be exposed to contaminants that might have migrated off site from soil run-off and air deposition; spills were allegedly confined to the site and cleaned up before contaminants could migrate off site, but air emissions apparently did deposit in off-site areas. For that reason, current exposure to off-site contamination is not expected.

Recommendations

- Creek water and sediment samples should be analyzed for contaminants that may have been released during the fire that occurred in 1989.
- Soil samples should include those from the site perimeter near residential areas and should be collected from the top three inches to better define whether contaminated soil migrated from the site and whether air emissions resulted in toxic chemicals depositing in off-site soil. If contamination is found, off-site residential soil sampling should be considered.